

REMARKS

In a final Office Action, dated September 15, 2006, the Examiner rejected claims 8 and 14 under 35 U.S.C. §112, first paragraph, as failing to comply with the written description requirement and rejected claims 1-20 under 35 U.S.C. §103(a) as being anticipated by Lioy (U.S. patent no. 6,775,553). In an Amendment and Response to the final Office Action, filed November 27, 2006, the applicants amended claims 8 and 14 and responded to the Examiner's rejection of claims 1-20. In an Advisory Action, dated December 19, 2006, the Examiner stated that the §112, first paragraph, rejection of claims 8 and 14 would be removed if no additional issues have been added. The Examiner further stated that the features that the applicants argue as distinguishing Lioy from the claims are not specifically claimed and that once these features are claimed, the claims may become allowable. The rejections and objections are traversed and reconsideration is hereby respectfully requested.

The applicants respectfully request that the Examiner enter the applicants' Amendment and Response to the final Office Action, filed November 27, 2006. The applicants thank the Examiner for the offer to remove the §112, first paragraph, rejection of claims 8 and 14 and respectfully request that such rejection be removed.

In accordance with the Examiner's suggestions, the applicants have amended claims 1, 9, and 15 to clarify the features that distinguish the claims from Lioy. More particularly, with respect to claim 1, the claim has been amended to provide a method for an infrastructure element to establish communications between two peers, the method comprising monitoring at least a portion of messages exchanged between the two peers for control messages, wherein the control messages comprise one or more parameters, storing at least one of the one or more parameters of the control messages exchanged between the two peers to produce a stored parameter, determining that a received control message is a retransmission of a control message from one of the two peers, wherein the retransmission of the control message will lead to duplicate negotiations between the two peers, and processing the retransmission of the control message and sending a valid proxy response comprising the stored parameter such that the duplicate negotiations are avoided between the two peers. These features are not taught by Lioy.

Lioy teaches two Point-to-Point Protocol (PPP) links, one between terminal equipment (TE2) and a mobile terminal (MT2) on one side of an air interface, called PPP_R , and another between the MT2 and an interworking function (IWF) of an infrastructure across the air interface (PPP_U). While PPP consists of Link Control Protocol (LCP), Challenge Handshake Authentication Protocol (CHAP), and Internet Protocol Control Protocol (IPCP) negotiation phases, the teachings of Lioy are confined to the IPCP phase only, and more particularly to the situation where the TE2 requests an IP address before the MT2 has obtained one from the IWF.

When the TE2 requests an IP address before the MT2 has obtained one from the IWF, Lioy teaches a sending of IPCP Configure-NAKs by the MT2 to the TE2 that includes an arbitrary and invalid IP address (until the actual IP address is supplied to the MT2 by the IWF). The purpose of this behavior is to allow additional time for the network/IWF to select an IP address for the TE2 while avoiding a timeout at the TE2 due to an absence of a response. That is, Lioy merely teaches receiving a request and then sending a Configure-NAK with an arbitrary and invalid IP address if no actual IP address has been supplied by the IWF. There is no determination made as to whether the request received by the MT2 is a retransmitted request. In fact, whether the received request is a retransmission is irrelevant to the operation of the MT2 as the MT2 merely is concerned with whether it has received a valid IP address from the IWF at the time that the TE2's request is received.

Also, the arbitrary and invalid IP address is generated by the MT2 and is not a parameter included in control messages exchanged between the TE2 and IWF. In fact, the arbitrary and invalid IP address is generated as a substitute for an IWF parameter until such a parameter is actually received from the IWF. Accordingly, the MT2 is not conveying, to the TE2, a parameter that has been monitored in, and stored from, messages exchanged between the TE2 and IWF. Therefore, Lioy does not teach the features of claim 1 of monitoring at least a portion of messages exchanged between the two peers for control messages, wherein the control messages comprise one or more parameters, storing at least one of the one or more parameters of the control messages exchanged between the two peers to produce a stored parameter, determining that a received control message is a retransmission of a control message from one of the two

peers, wherein the retransmission of the control message will lead to duplicate negotiations between the two peers, and processing the retransmission of the control message and sending a valid proxy response comprising the stored parameter such that the duplicate negotiations are avoided between the two peers. Accordingly, the applicants respectfully request that claim 1 may now be passed to allowance.

Since claims 2-8 depend upon allowable claim 1, the applicants respectfully request that claims 2-8 may now be passed to allowance.

Claim 9 provides, in a communication system comprising at least two peers that communicate with each other across an intermediate network comprising at least one infrastructure element, a method for an infrastructure element of the at least one infrastructure element to establish communications between a first peer and a second peer of the at least two peers, the method including storing receiving from the first peer, a request control message targeted to the second peer, forwarding the request control message to the second peer, receiving from the second peer, a response to the request control message, storing at least one parameter from the response to the request control message to produce a stored parameter, receiving, from the first peer, a retransmission of the request control message targeted to the second peer, and processing the retransmission of the request control message and sending a valid proxy response to the first peer comprising the stored parameter. As described in detail above, Lioy does not teach these features. Accordingly, the applicants respectfully request that claim 9 may now be passed to allowance.

Since claims 10-14 depend upon allowable claim 9, the applicants respectfully request that claims 10-14 may now be passed to allowance.

Claim 15 provides an apparatus for use in an intermediate network across which at least two peers communicate with each other, the apparatus comprising a processor that monitors at least a portion of messages exchanged between two peers of the at least two peers for control messages, wherein the control messages comprise one or more parameters, stores, in an at least one storage device, at least one parameter of the one or more parameters corresponding to the control messages exchanged between the two peers

to produce a stored parameter, determines that a received control message is a retransmission of a control message from one of the two peers, wherein the retransmission of the control message will lead to duplicate negotiations between the two peers, and processes the retransmission of the control message and sends a valid proxy response comprising the stored parameters such that the duplicate negotiations are avoided between the two peers. As described in detail above with respect to claim 1, these features are not taught by Lioy. Accordingly, the applicants respectfully request that claim 15 may now be passed to allowance.

Claims 19 and 20 teach a base station controller (BSC) and a mobile switching center (MSC) embodying the apparatus of claim 15. All functionality taught by Lioy in the section of Lioy referenced by the Examiner in rejecting claims 19 and 20 (col. 5, line 62 to col. 6, line 30) is performed by the MT2 (element 104). The base station (BS) and mobile switching center (MSC) taught by Lioy are mere conduits, or relays, for control messages. Again, Lioy teaches a PPP_U link between the MT2 and the IWF, bypassing the BS/MSC, and neither the BS nor the MSC participate in the PPP layer negotiations. By contrast, the BSC and MSC of claims 19 and 20 detect occurrence of retransmission of a control message from one of the two peers, wherein the retransmission of the control message will lead to duplicate negotiations between the two peers, process the retransmitted control message, and send a valid proxy response based on the stored parameters such that the duplicate negotiations are avoided between the two peers. Therefore, Lioy does not teach an embodiment of the apparatus described in claim 15 in a BSC or MSC. For these reasons, and since claims 16-20 depend upon allowable claim 15, the applicants respectfully request that claims 16-20 may now be passed to allowance.

As the applicants have overcome all substantive rejections and objections given by the Examiner and have complied with all requests properly presented by the Examiner, the applicants contend that this Amendment, with the above discussion, overcomes the Examiner's objections to and rejections of the pending claims. Therefore, the applicants respectfully solicit allowance of the application. If the Examiner is of the opinion that any issues regarding the status of the claims remain after this response, the Examiner is invited to contact the undersigned representative to expedite resolution of the

matter. Furthermore, please charge any additional fees (including any Request for Continuing Examination and extension of time fees), if any are due, or credit overpayment to Deposit Account No. 50-2117.

Respectfully submitted,
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